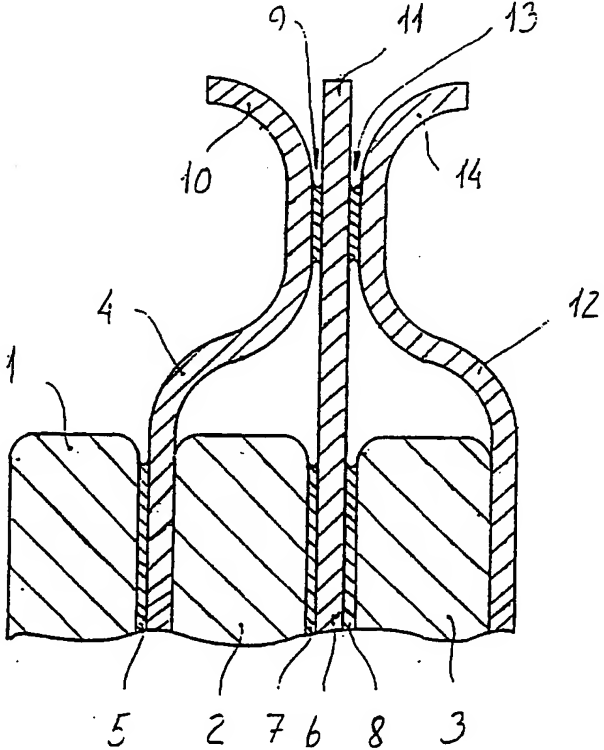




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/DK92/00208</p> <p>(22) International Filing Date: 30 June 1992 (30.06.92)</p> <p>(30) Priority data: 1399/91 26 July 1991 (26.07.91) DK</p> <p>(71)(72) Applicant and Inventor: FUNCH, Helge [DK/DK]; Klyngen 33, DK-2670 Greve (DK).</p> <p>(74) Agent: LEHMANN &amp; REE A/S; Grundtvigsvej 37, DK-1864 Frederiksberg C (DK).</p> <p>(81) Designated States: AU, BR, CA, FI, JP, NO, US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE).</p>		<p>Published With international search report. In English translation (filed in Danish).</p>
<p>(54) Title: DISPOSABLE WASH CLOTH</p> <p>(57) Abstract</p> <p>A disposable wash cloth comprises a first exposed absorbing layer (1), a second disinfectant layer (2), and a third layer (3). The first layer (1) is exposed for immediate use, while the second layer (2) is hermetically enclosed between two attached plastic sheets (4) and (6), and this second layer is moistened with disinfectant substances. The third layer (3) may be impregnated or moistened with a deodorant and may also be hermetically enclosed between two attached plastic sheets (6) and (12). During use of the disposable wash cloth, the first layer (1) is used initially to remove impurities from the smudged area. Then, the one plastic sheet (4) onto which the first layer (1) is attached is torn off from the second plastic sheet (6) by the use of flaps (10) and (11) and is discarded. The second layer (2) is subsequently used for thorough cleaning of the area, after which the third layer (3) is used for final wiping and optionally application of scented substances contained in this third layer.</p> 		

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## DISPOSABLE WASH CLOTH

BACKGROUND OF THE INVENTION

5 The present invention relates to a disposable wash cloth comprising two absorbing layers which are mutually separated by a plastic sheet, and in which one of the layers is moistened with a detergent and/or a disinfectant substance, and in which the other of the layers may be dry or moistened.

10 Varying types of this kind of disposable wash cloth are known. Thus, a type is known which comprises only one absorbing layer which is moistened with a disinfectant liquid (refresher cloth). Alternatively, wash cloths are known which exclusively comprise one or more absorbing layers that may optionally contain disinfectant or scented dry substances.

15 In WO No. 90/07297, a sanitary "gauntlet" is described, which comprises a first double layer of plastic film forming a rectangular shape. This rectangular "gauntlet" is hot-welded along both of the long sides and along the one short side. The user may then conveniently insert  
20 his hand into the gauntlet through the opening formed at the last short side. On one or both outer sides of this "gauntlet" a layer of a substance is applied, preferably a mixture of cotton fibres and viscose fibres which are drenched with a cleaning and/or a disinfectant liquid. On top of this substance a second rectangular layer of plastic  
25 film is placed which is hot-welded to the first layer along the edges so that the layer with the liquid-drenched substance is enclosed by the first and second layer of plastic film. In use, the second layer of plastic film which covers the cleaning substance is removed first, whereupon cleaning of the relevant area can be carried out. Thus, the  
30 fact that the gauntlet is not ready for immediate use may be disadvantageous if a smudge suddenly occurs which needs to be cleaned up quickly.

35 It is the object of the invention to eliminate the disadvantage of the known above-mentioned disposable wash cloths and to combine the advantages of the absorbing wash cloths with the advantages of the wash cloths moistened with cleaning and disinfectant liquids.

According to the invention this is obtained with a disposable wash

cloth which is characterized in that the first absorbing layer of the wash cloth is exposed for the user and is intended for being torn off easily, together with the plastic sheet, that the hereby exposed second layer is moistened with a disinfectant liquid and is hermetically enclosed between two plastic sheets, and that the wash cloth further comprises at least a third absorbing layer.

The wash cloth according to the invention, wherein at least the first absorbing layer is exposed, allows for immediate use thereof. Furthermore, after removal of a plastic sheet and the attached first absorbing layer it is possible to carry out a disinfecting cleaning of the wiped area with the second layer, and a final wipe optionally combined with the application of powder and deodorant with the third layer.

According to an advantageous embodiment the third absorbing layer is also hermetically enclosed between two plastic sheets and impregnated with talcum powder or like liquid-absorbing substances and perhaps a scented substance for use after the absorbing layer and the disinfectant layer. This is especially advantageous for persons with heavy perspiration.

By letting a part of the edges of a plastic sheet end with two straps it will be possible to use the disposable wash cloth as a bib.

The disposable wash cloth according to the invention is intended for use in several connections; e.g. for the washing of children, elderly people, handicapped or bedridden, or for normal everyday use by people incommoded by perspiration or other bodily secretions, and for use in the hospital sector where hygiene is imperative, especially where sterility is required.

#### DESCRIPTION OF THE DRAWING

The invention will now be further explained with reference to the accompanying drawing wherein

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Fig. 1 shows a sectional view of a first embodiment of a disposable wash cloth according to the invention,

Fig. 2 shows a sectional view of a further embodiment of a disposable wash cloth,

Fig. 3 shows a view of the disposable wash cloth provided with two straps for use as a bib, and

Fig. 4 shows a sectional view of an embodiment which corresponds to the one shown in Fig. 1.

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Fig. 1 illustrates a disposable wash cloth with a first absorbing layer 1 which is exposed for the user, and which is attached to a plastic sheet 4 by means of an adhesive 5. A second layer 2 which is moistened with a disinfectant liquid is attached to a second plastic sheet 6, also by means of an adhesive 7. Alternatively, the layer 2 may be loosely placed between the plastic sheets 4 and 6. A third layer 3 is attached to the second plastic sheet 6 by an adhesive 8 on the opposite side of where the second layer 2 is attached. Outside the extension of the second layer 2, the plastic sheets 4 and 6 are adhered, welded or in any other way attached to each other. The plastic sheets 4 and 6 are provided with flaps 10 and 11 in order to ease separation of the two plastic sheets.

During use of the disposable wash cloth, the exposed, absorbing layer 1 is used first for wiping the area to be cleaned. After this first layer has removed the major impurities, the plastic sheet 4 is torn off from the plastic sheet 6 by the flaps 10 and 11. The plastic sheet 4 and the now used layer 1 are discarded. Thereby, the second layer 2 is exposed which, as mentioned, is moistened with a disinfectant liquid. Subsequently, the smudged area is cleaned with the second layer in order to ensure that the area is both sufficiently and properly clean from a hygienic point of view. Finally, the third layer 3 is used for final wiping of the now cleaned area.

This third layer 3 may be impregnated with additional disinfectant substances, talcum powder and/or like substances. However, in the embodiment shown in Fig. 1, these substances must not be volatile substances as the third layer is not enclosed in plastic sheets.

Fig. 2 illustrates a further embodiment in which some of the elements are identical with the elements of the embodiment shown in Fig. 1. Except for the second layer 2, the third layer 3 in the embodiment shown in Fig. 2 is also hermetically enclosed between two plastic sheets 6 and 12. The plastic sheet 12 is attached to the plastic sheet

6 by means of an adhesive 13, welding or in another way. Like the sheets 4 and 6 the plastic sheet 12 is provided with one or several flaps 14 in order to facilitate the separation of the two sheets 6 and 12. The third layer 3 may be adhered either to the plastic sheet 6 as shown in Fig. 2, or to the plastic sheet 12.

During use of the disposable wash cloth, the exposed, absorbing layer 1 (as the one in the embodiment shown in Fig. 1) is used first for initial cleaning of the smudged area; afterwards, the plastic sheet 4 is torn off from the sheet 6 using flaps 10 and 11, so that the second layer 2 may be used; finally, the plastic sheets 6 and 12 are separated using flaps 11 and 14 for exposure of and subsequent wiping with the third layer 3. If the third layer is attached to the plastic sheet 12, the plastic sheet 6 and the second layer 2 are discarded.

It is an advantage of the above-mentioned embodiment that the third layer may be impregnated with disinfectant substances, talcum powder and/or like substances, which may be volatile as the hermetic enclosure ensures that the substances do not evaporate from the third layer.

It is a further advantage that it will be possible to keep both the second and the third layer sterile as both are hermetically enclosed.

Fig. 3 illustrates an embodiment in which a part of the edge on one of the plastic sheets 4, 6, or 12 form two straps 15 which can be tied around the neck of a user. Hereby, the wash cloth may be used as a bib. This wash cloth may have the embodiment shown in Fig. 1 or Fig. 2. Fig. 3 illustrates an example of how the sectional view in Fig. 1 may have been taken. It is also shown how the sectional view shown in Fig. 4 is taken.

Fig. 4 illustrates the disposable wash cloth in an embodiment corresponding to the one in Fig. 1, but in Fig. 4 the wash cloth is not shown in a sectional view. It illustrates how the plastic sheets 4 and 6 are joined along the entire edge and are provided with flaps 10 and 11.

For the three embodiments shown, the three layers 1, 2, and 3 will

preferably be made of paper pulp in order to keep the production costs for the wash cloth low. If preferred for special applications, the layers of the wash cloth may, however, be made of any other natural or artificial material suitable for absorption.

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The plastic sheets are preferably manufactured from steam impermeable plastic so that the substances, of which the second layer 2 and optionally the third layer 3 are moistened with, do not diffuse out through the plastic in case evaporation occurs.

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If one of the sheets also is impregnated with a scented substance and the scent is not retained by the steam impermeable plastic, the plastic film may be combined with aluminium foil or the like with a higher degree of impermeability than the plastic.

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C L A I M S

1. A disposable wash cloth comprising two absorbing layers (1,2) which are mutually separated by a plastic sheet (4), and in which one of the layers is moistened with a detergent and/or a disinfectant substance,  
5 and in which the other of the layers may be dry or moistened, characterized in that the first absorbing layer (1) of the wash cloth is exposed for the user and is intended for being torn off easily, together with the plastic sheet (4), that the hereby exposed  
10 second layer (2) is moistened with a disinfectant liquid and is hermetically enclosed between two plastic sheets (4,6), and that the wash cloth further comprises at least a third absorbing layer (3).

2. A disposable wash cloth according to claim 1, characterized in that the third absorbing layer (3) is impregnated with disinfectant substances, talcum powder and/or like substances, e.g. deodorant, and is hermetically enclosed between two plastic sheets (6,12).  
15

3. A disposable wash cloth according to claim 1, characterized in that the third absorbing layer (3) is impregnated with disinfectant substances, talcum powder and/or like substances, e.g. deodorant, and is placed on the side of the wash cloth which faces away from the first absorbing layer (1) and is hermetically enclosed between two plastic layers (6,12).  
20

4. A disposable wash cloth according to claim 1, characterized in that the third absorbing layer (3) is a liquid absorbing layer which is exposed for the user and is placed on the side of the wash cloth which faces away from the first absorbing layer (1).  
25

5. A disposable wash cloth according to any of the preceding claims, characterized in that the plastic sheets (4,6,12) are mutually attached and provided with one or several free flap-shaped edges (10,11,14), so as to provide easy individual separation and  
30 exposure of an absorbing layer placed there between.

6. A disposable wash cloth according to any of the preceding claims, characterized in that the first absorbing layer (1) is made primarily of paper pulp.



7. A disposable wash cloth according to any of the preceding claims,  
c h a r a c t e r i z e d in that the edge areas of the plastic sheets  
which hermetically enclose an absorbing layer are glued together or  
welded at a distance from the edges so that along at least a part of  
5 the enclosing edges, draw flaps (10,11,14) for the separation of the  
sheets are formed.

8. A disposable wash cloth according to any of the preceding claims,  
c h a r a c t e r i z e d in that on one of the plastic sheets  
10 (4,6,12), a part of the free edge(s) form(s) two straps (15) which can  
be tied around the neck of a user.

9. A disposable wash cloth according to any of the preceding claims,  
c h a r a c t e r i z e d in that the absorbing layers (1,2,3) are  
15 glued to the sheets (4,6,12).

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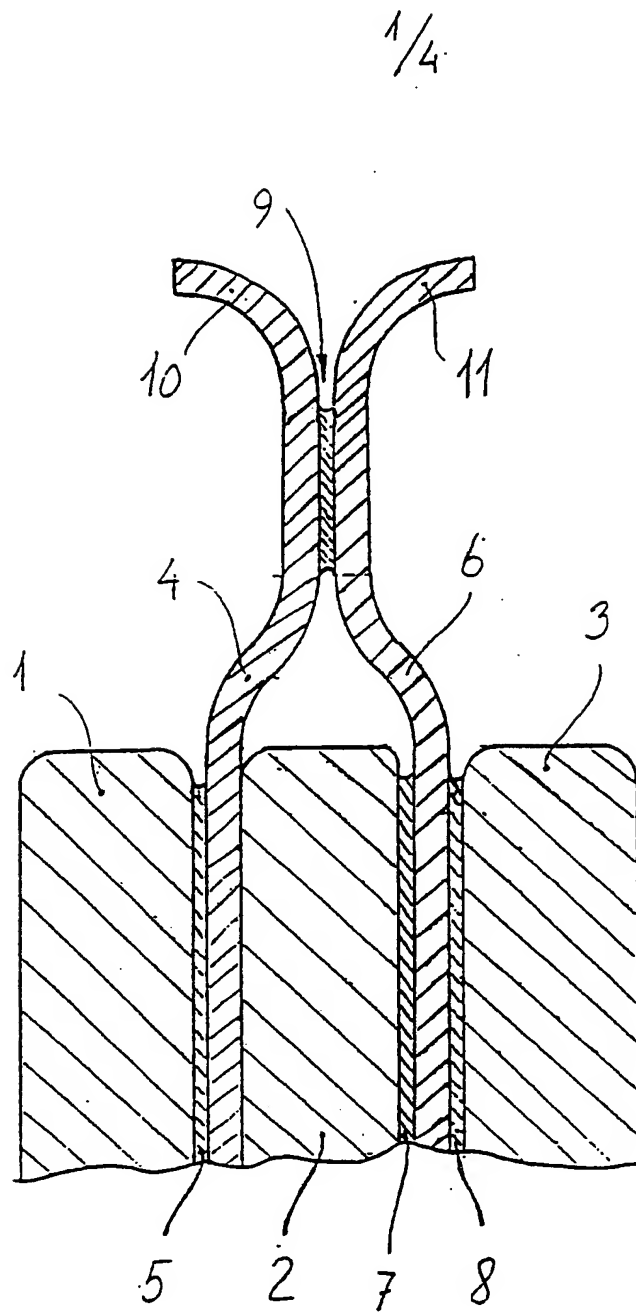


FIG. 1

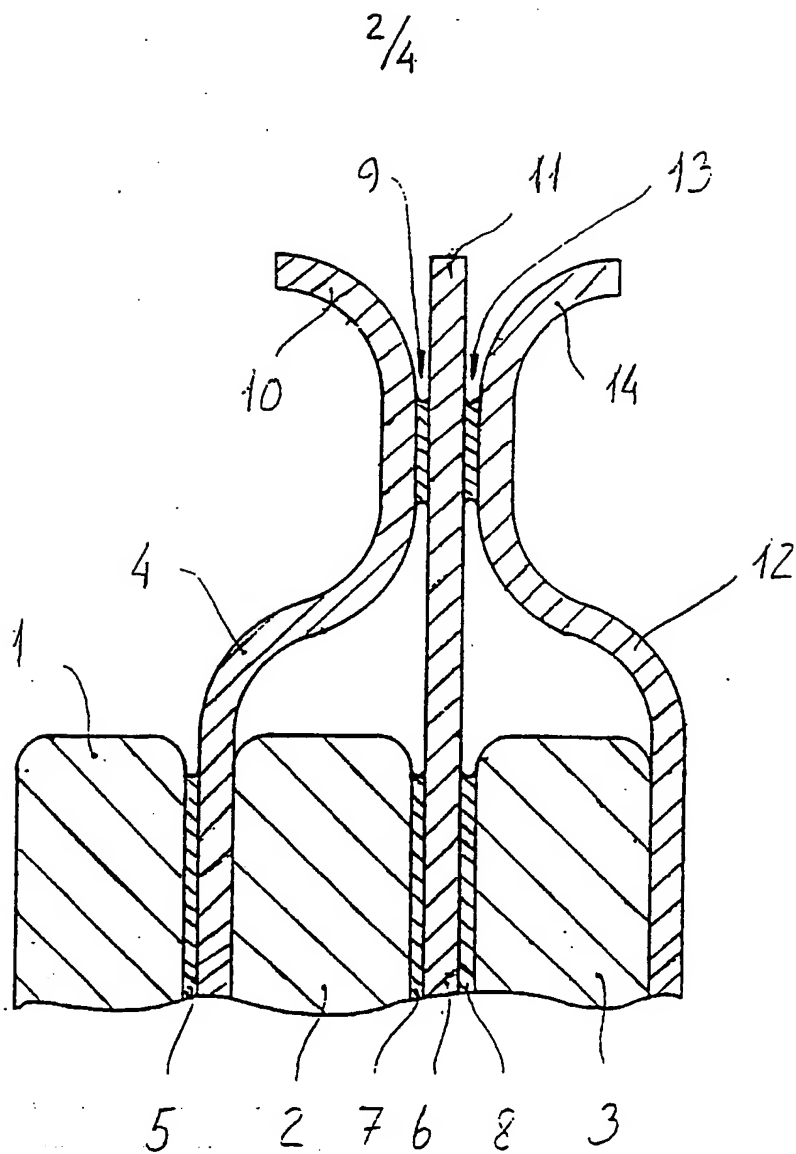


FIG. 2

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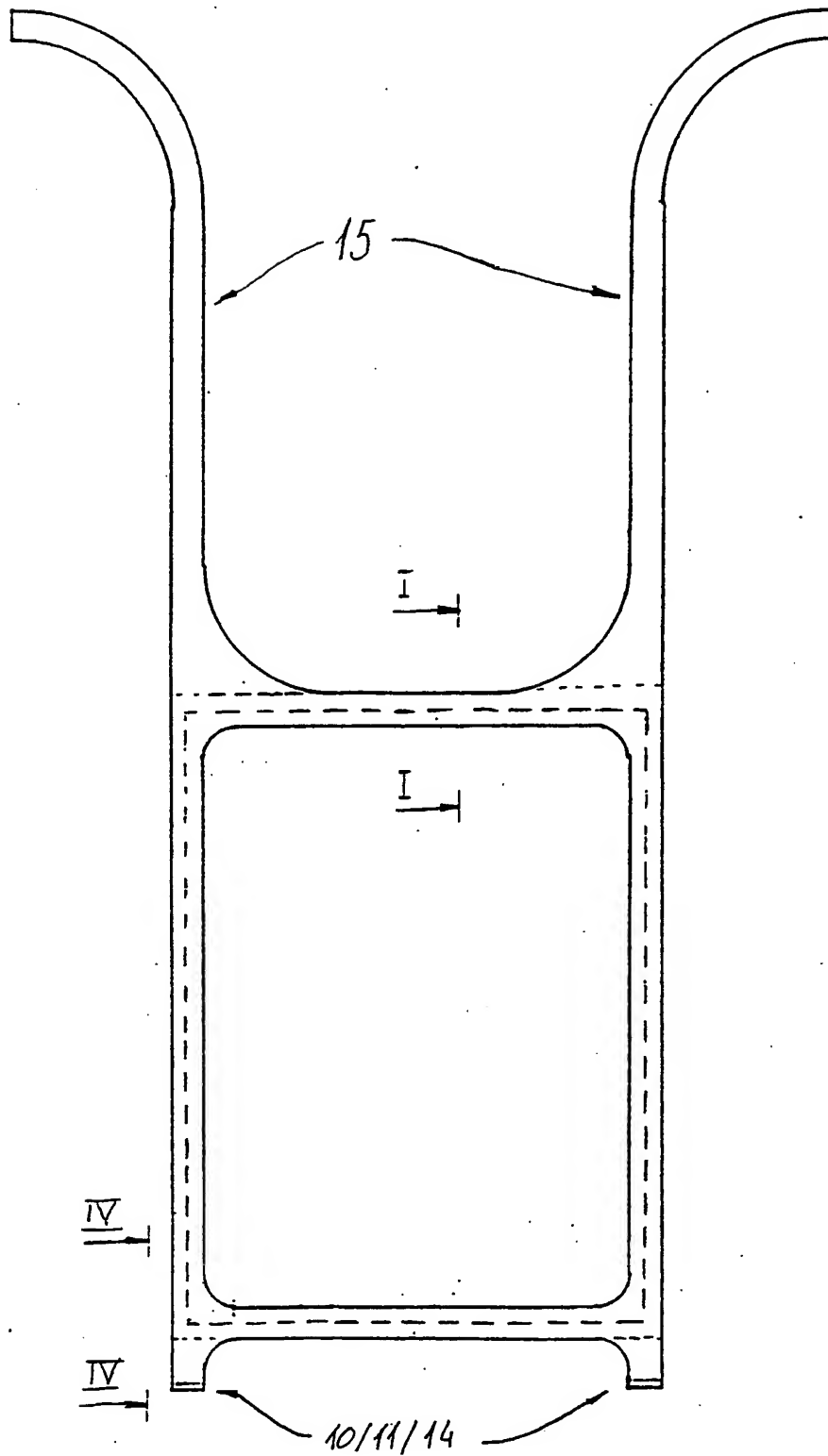


FIG. 3

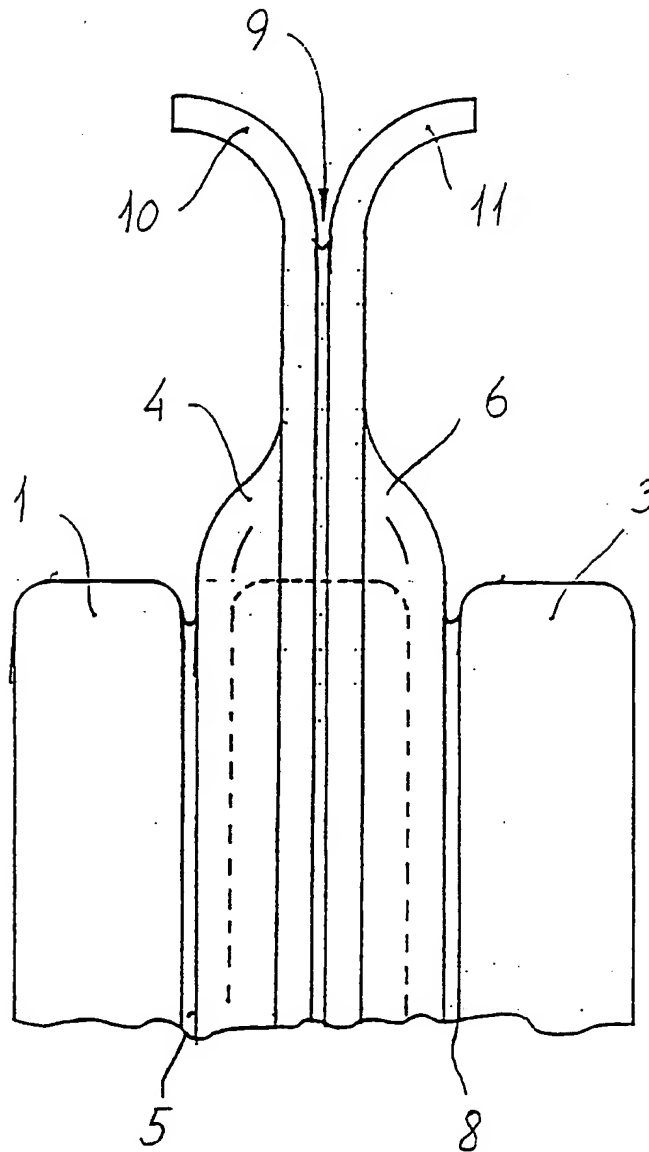
$$4/4$$


FIG. 4

## INTERNATIONAL SEARCH REPORT

International Application No PCT/DK 92/00208

<b>I. CLASSIFICATION OF SUBJECT MATTER</b> (If several classification symbols apply, indicate all) <sup>6</sup>		
According to International Patent Classification (IPC) or to both National Classification and IPC		
IPC5: A 47 K 7/03		
<b>II. FIELDS SEARCHED</b>		
Minimum Documentation Searched <sup>7</sup>		
Classification System	Classification Symbols	
IPC5	A 47 K; A 61 F; C 11 D	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in Fields Searched <sup>8</sup>		
SE,DK,FI,NO classes as above		
<b>III. DOCUMENTS CONSIDERED TO BE RELEVANT<sup>9</sup></b>		
Category <sup>*</sup>	Citation of Document, <sup>11</sup> with indication, where appropriate, of the relevant passages <sup>12</sup>	Relevant to Claim No. <sup>13</sup>
A	FR, A1, 2599955 (MECANETUDE S.A.R.L.) 18 December 1987, see fig. 1  -----	1-9
<p><sup>*</sup> Special categories of cited documents: <sup>10</sup></p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&amp;" document member of the same patent family</p>		
<b>IV. CERTIFICATION</b>		
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
27th October 1992	30 -10- 1992	
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## ANNEX TO THE INTERNATIONAL SEARCH REPORT ON INTERNATIONAL PATENT APPLICATION NO. PCT/DK 92/00208

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-A1- 2599955	87-12-18	NONE	